In the Specification:

Please amend paragraph [0001] as follows:

[0001] The present invention relates to a composite member comprising ~~bonded~~ different members bonded to one another, and more particularly to a composite member comprising different members bonded using a specific solder material through solid phase bonding, and a method for making the composite member.

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Please amend paragraph [0002] as follows:

[0002] There is a method of using a solder material for bonding different members, for example, a ceramic base and a metallic member. However, during cooling operation in bonding them at high temperatures, thermal stress is generated owing to the differences in thermal expansion coefficients between the different members or between the member and the solder material used for bonding these different members. ~~to~~ Different thermal expansion coefficients between the members can cause separation at the bonded interface, or if one of the members is fragile, cracks occur in the vicinity of the bonded interface and sometimes the desired bonding strength or airtightness cannot be obtained. The products in which these defects are caused during the production steps must be disposed of as rejected products, and this results in an increase of the production cost of these composite members. Moreover, if they are subjected to thermal cycles in use, the defects occur after use of a certain period to cause deterioration of reliability of the products.

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Please amend paragraph [0003] as follows:

[0003] When different members are bonded using a solder material, a method is generally employed according to which the surface of the ceramic base to be bonded is plated with a

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metal such as Ni to ensure wetting between the ceramic base and the solder material, then these members are disposed opposite to each other with a suitable space, the solder material is poured into the space, and the members are bonded. There is another method according to which an additive such as Ti which can ensure wetting by forming a reactive layer of a nitride or an oxide on the surface of the ceramic base is added to the solder material, without carrying out the plating with a metal. However, in these methods, unless some means are adopted for reducing the thermal stress generated at the bonded part, cracks are often formed on the side of the ceramic base which is fragile against thermal stress or separation occurs at the bonded part to adversely affect various performances such as bonding strength and airtightness required for composite members. It is especially difficult to bond a member of low strength, such as aluminum nitride to a different member such as a metallic material ~~with~~while inhibiting the occurrence of the above problems.

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Please amend paragraph [0009] as follows:

[0009] According to this bonding structure, the low thermal expansion material 15 and the metallic member 17 are relaxed in residual stress at bonding and, besides, oxidation of the metallic member 17 such as Mo is inhibited by the atmospheric protector 9, and, hence, even if bonding is performed using a solder material of high proof stress, such as above-mentioned ~~Au-!8Ni~~Au-18Ni solder, cracks are not formed in the ceramic base 1 at bonding and furthermore endurance reliability is high in case the bonded part is exposed to thermal cycle and thermal shock at the time of using a high-temperature heater. However, the above bonding structure suffers from the problems that the number of parts increases, and very high production control capacity is required because the metallic member 17 is deteriorated due to oxidation unless the atmospheric protector 9 and the metallic member 17 are completely

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bonded.

Please amend paragraph [0010] as follows:

[0010] Furthermore, JP-A-11-278951 discloses a bonded member and a bonding method, as illustrated in Figs. 5-7. ~~in which for bonding~~ Enclosed within chamber 21 of housing 20 is a ceramic susceptor 22, which has a wafer placing face 22a and a backside 22b. A wafer 24 is placed on wafer placing face 22a and a corrosion resistant metal ring 23, such as of Kovar, is attached at an interface portion 25 between susceptor 22 and metal ring 23 to back side 22b of ceramic susceptor 22 in the ceramic base having a structure shown in FIG. 5.~~;~~ ~~t~~These member structures are allowed to have the shapes as shown in FIG. 6 and FIG. 7 for relaxation of the generated thermal stress. That is, to allow the member structures to have these shapes is effective for thermal stress relaxation, but in the case of the ceramic being fragile, the solder material changes in properties due to dissolution of the metallic member in the method of bonding the metallic member and the ceramic base by melting the solder material as disclosed in the above patent publication, and the effect to relax the thermal stress is insufficient with giving only such care for the bonding structure as disclosed in the above patent publication, resulting in troubles such as rupture of the ceramic base.

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Please replace the heading on page 11, line 1 with the following rewritten heading:

Detailed Description of ~~Preferred Embodiments of~~ the Invention

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Please amend paragraph [0024] as follows:

[0024] FIGS. 1(a) and (b) are schematic views which show the first embodiment of the method for making the composite member by bonding different members of the present invention (hereinafter referred to as "composite member"), and FIG. 1(a) shows the first step and FIG. 1(b) shows the second step. In the first step, an active metal foil 4 and a solder material comprising Au (Au solder material 5) are disposed so as to cover a ceramic base 1, followed by heating them to form a bonding layer 6. In the subsequent second step, a metallic member 7 is disposed on the surface of the bonding layer 6, and are bonded through solid phase bonding by pressing and heating them, thereby making a composite member.

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Please amend paragraph [0027] as follows:

[0027] Next, the second embodiment of the present invention will be explained. FIGS. 2(a) and (b) are schematic views which show the second embodiment of the method for making the composite member the present invention, and FIG. 2(a) shows the first step and FIG. 2(b) shows the second step. In the first step, an active metal foil 4 and a solder material comprising an Au-Ag alloy (Au-Ag alloy solder material 10) are disposed so as to cover a ceramic base 1, followed by heating them to form a bonding layer 6. In the subsequent second step, a metallic member 7 is disposed on the surface of the bonding layer 6, and are bonded through solid phase bonding by pressing and heating them, thereby making a composite member.

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Please amend paragraph [0038] as follows:

[0038] In the present invention, it is preferred that an electrical conductor comprising Mo, W or an alloy of Mo and W is embedded in the ceramic base in such a state that a part of the

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surface of the electrical conductor is exposed to the exterior of the ceramic base. FIG. 3 schematically shows another embodiment of the method for making the composite member according to the present invention, wherein Fig. 3(a) shows the first step and Fig. 3(b) shows the second step. An Mo mesh 2 and an electrical conductor (Mo) 3 disposed so as to be electrically connected to the Mo mesh 2 are embedded in the ceramic base 1. In the first step, an active metal foil 4 and a solder material 11 are disposed so as to cover the surface of the ceramic base 1 and that of the electrical conductor (Mo) 3, followed by heating them to form a bonding layer 6. In the subsequent second step, a metallic member 7 is disposed on the surface of the bonding layer 6, followed by performing solid phase bonding by pressing and heating them to make a composite member.

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Please amend paragraph [0044] as follows:

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[0044] The shape of the metallic member is not limited to the one shown in FIGS. 1(a) and (b), but various shapes such as columnar, square pillar, pyramid, ring and other shapes can be optionally employed.

Please amend paragraph [0052] as follows:

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[0052] Tensile strength of Sample Nos. 1-3 was measured. The results are shown in Table 1.

Table 1

Sample no.	Soldering condition		Ni-terminal boding conditions		Rupture load (kgf)	Average rupture load (kgf)
	Temp. (°C)	Time (min.)	Temp. (°C)	Time (min.)		
1	1100	10	870	30	97.5	72.5
2	1100	10	870	30	62.0	
3	1100~~1~~	10	870	30	58.0	

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Please amend paragraph [0053] as follows:

[0053] Sample Nos. 4-6 were subjected to a thermal cycle test of 100 cycles at 700°C, and, thereafter, tensile strength thereof was measured. The results are shown in Table 2. An enlarged photograph of sectional structure of the bonded part after carrying out the thermal cycle test is shown in FIG. 10.

Table 2

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Sample no.	Soldering condition		Ni-terminal boding conditions		Rupture load (kgf)	Average rupture load (kgf)
	Temp. (°C)	Time (min.)	Temp. (°C)	Time (min.)		
4	1100	10	870	30	61.7	77.5
5	1100	10	870	30	78.7	
6	1100~~1~~	10	870	30	91.8	

* Thermal cycle test conditions: 700°C × 100 cycles

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